Page 12 Docket No.: XNT 00-03

Application Number: 09/598,793

Filing Date: 06/21/2000

Title: DIGITAL FINGERPRINT IDENTIFICATION SYTEM

REMARKS

This Office Action Response is presented in response to the Final Office Action mailed on June 01, 2007. Claims 1, 6, 11, 15, 18, 19, 21, 23-25, and 28 have been amended. As a result, claims 1-30 are presented herein for examination.

Examiner's Response to Arguments

The Examiner addressed the arguments presented in the Response / Amendment mailed on March 12, 2007. The Applicant thanks the Examiner for the Examiner's consideration of the Applicant's arguments. The Applicant addresses, below, the current outstanding issues in the present Final Office Action with respect to the specific corresponding objections and/or rejections, respectfully. In particular, claims have been amended as appropriate and where indicated, above, to recite the limitations previously argued in the Response / Amendment. It is respectfully traversed that the specification merely refers to the fingerprint as "identification" as specification clearly recites "unique digital signatures", "identifications" (see page 1, line 14), "digital fingerprint" (see page 2, line 30), "fingerprint" (see page 3, line 24), "digital fingerprint (identification)" (see page 4, line 4), and so on. However, the generation of the digital fingerprint is addressed in the claims as amended, above, and as argued with respect to the rejections, below. Furthermore, it should be noted that Eraslan is directed to a three-dimensional face identification system, and the Examiner has presented to arguments or rationale why such a system should be applied to the field of endeavor as recited in the claims as amended herein. It should be noted that claims 1-30 are presented herein for examination.

Information Disclosure Statement

The Examiner indicated that the Information Disclosure Statement filed on October 23, 2000 fails to comply with 37 CFR 1.98(a)(1). Since no references were provided in this Information Disclosure Statement (merely a statement that no references were being provided was submitted), Applicants' respectfully consider this issue moot.

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The Examiner indicated that the Information Disclosure Statement filed on July 12, 2002 also fails to comply with 37 CFR 1.98(a)(1). Unlike the above IDS, this one did contain references. Therefore the Applicant is providing a compliant Information Disclosure Statement with this Amendment.

Claims Rejections – 35 USC § 112

The Examiner rejected claims 1, 6, 11, and 15 under 35 USC § 112, first paragraph, as failing to comply with the written description requirement.

The Applicant respectfully traverses the rejection for the following reasons. The Applicant traverses the Examiner's interpretation of the invention as claimed and as amended herein, as it is noted that, for example, the polling iterations are not required to be performed at power up a plurality of times. The Applicant kindly points out that the specification is replete with support for the recitations of the claims as amended herein, clearly placing the inventor in possession of the claimed invention. For example, the Examiner's attention is kindly directed to the following passages of the specification in which support may be found, among other places:

Page 5, lines 9-14:

Figure 5). In one embodiment, digital fingerprint circuit 42 comprises a series of tightly packed, small transistors (ID Cell Array 54) and a comparator 56 that compares the relative voltages of adjacent transistors. (See Background of the Invention, above and Figure 5). In another embodiment, fingerprint circuit 42 comprises static RAM, which, at initial power on, yields a random binary number that can be used as a digital fingerprint. User device 40 can be any device that includes integrated circuits, including a personal computer, a cell phone,

Page 5, lines 28-30:

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change significantly over time, even though the bit itself may be very likely to flip. In one embodiment, the digital fingerprint is iteratively read a predetermined number of times in order to calculate the most likely value for each bit in the digital fingerprint. In one

Page 6, lines 7-13:

and analog bias 58. These components operate, as discussed above, to yield a binary number resulting from the relative voltage differences among the transistors in ID Cell Array 54. Fingerprint circuit 42, however, can comprise static RAM or any other means of yielding a random string of bits. With the use of static RAM, the fingerprint, in one embodiment, is read at power on and does not involve the use of a comparator to compare relative voltages of adjacent transistors. In one embodiment, control circuit 60 is configured to execute the method illustrated in Figure 2.

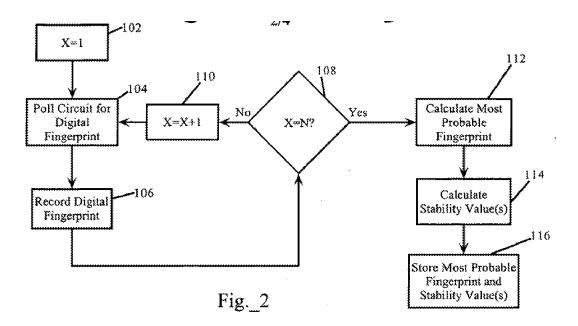
Page 6, lines 14-18:

As Figure 2 shows, control circuit 60 polls fingerprint circuit 42 a desired number (N) times and records each resulting fingerprint value (steps 102, 104, 106, 108 and 110). From these recorded values, control circuit 60 calculates the most probable digital fingerprint (Figure 2, step 112). In one embodiment, control circuit 60, on a bit by bit basis, calculates the most likely value for each bit based on the iterative reads described above. In one

Page 6, lines 28-30:

use these stability values in an optimized lookup method. According to one embodiment of the present invention, control circuit 60 calculates the most probable fingerprint and, optionally, stability values and stores such values in memory each time user device 40 is powered up.

FIG. 2:



The specification further teaches that fabrication of a silicon die including chip features that are not precise creates a random effect that can be used to generate a random binary number (se for example page 1, lines 14-16). Thus, it is believed that the specification clearly provides an abundance of support for the limitations of the claims as recited herein, and on of ordinary skill in the art would recognize that the inventor was in possession of the claimed invention at the time the application was filed. Furthermore, it appears the Examiner has failed to meet the burden required under MPEP 2163.04 to establish a written description requirement rejection, as

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the Examiner did not state why a person of ordinary skill in the art would not have recognized that the inventor was in possession of the invention as claimed in view of the disclosure of the application as filed. In meeting this burden, it is not sufficient for the Examiner to merely state "Examiner cannot find support with respect to claims 6, 11, and 15 as amended" in the absence of such an explanation. In contrast, the Applicant has pointed out numerous locations in the disclosure where support for the claims may be found, thereby providing evidence in support of possession. It is therefore believed that the § 112 rejection should be withdrawn.

Claim Objections

The Examiner objected to claim 1 and the intervening claims as being indefinite regarding recitation of the word "the" in claim 1.

The Examiner's attention is kindly directed to page 2 of the Amendment / Response submitted on March 12, 2007 in which the objected to word "the" was deleted from claim 1 and replaced with the word "a". It is therefore believed that the rejection should be withdrawn.

Claim Rejections – 35 USC § 102

The Examiner rejected claims 11-17 and 21-30 under 35 USC § 102(e) as being anticipated by the patent to Eraslan (6,381,346).

The Applicant respectfully traverses the rejection for at least the following reasons. Independent claims 11, 15, 23, 25, and 28 have been amended herein to recite, among other things:

Claim 11:

the circuit being disposed on a silicon die and comprising two or more devices formed on the silicon die, the digital fingerprint being based at least in part on an electrical characteristic of the two or more devices of the circuit due to a process by which the silicon die was manufactured

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Claim 15:

the integrated circuit comprising two or more devices formed on the integrated circuit, the digital fingerprint being based at least in part on an electrical characteristic of the two or more devices of the integrated circuit due to a process by which the integrated circuit was manufactured

Claims 23, 25:

the digital fingerprint corresponding to characteristics of a circuit, the circuit being disposed on an integrated circuit and comprising two or more devices formed on the integrated circuit, the digital fingerprint being based at least in part on an electrical characteristic of the two or more devices of the circuit due to a process by which the integrated circuit was manufactured

Claim 28:

the digital fingerprints corresponding to characteristics of a corresponding circuit, the circuit being disposed on an integrated circuit and comprising two or more devices formed on the integrated circuit, the digital fingerprints being based at least in part on an electrical characteristic of the two or more devices of the corresponding circuit due to a process by which the integrated circuit was manufactured

Nowhere does the patent to Eraslan teach that the digital fingerprint is based at least in part on an electrical characteristic of the two or more devices of the circuit due to a process by which the silicon die was manufactured, as recited in claim 11 as amended herein, or by which the integrated circuit was manufactured as recited in claims 15, 23, 25, and/or 28, as amended herein, and their respective dependent claims. In fact, a text search of the patent to Eraslan as obtained from the USPTO website was performed, and the words "digital fingerprint", "silicon

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die", "circuit" and "integrated circuit" were not found in Eraslan, let alone a digital fingerprint being based at least in part on an electrical characteristic of the two or more devices. Therefore, since the teaching of Eraslan is not identical to the methods recited in claims 11 and claim 15 as amended herein, Eraslan does not anticipate claim 11 or claim 15. It is therefore believed that the rejection should be withdrawn.

Claim Rejections – 35 USC § 103

The Examiner rejected claims 1-4 and 6-8 under 35 USC § 103(a) as being unpatentable over the patent to Rhoads (6,026,193) in view of the patent to Ng (6,058,238). The Examiner rejected claims 5, 9, 10 and 18-20 under 35 USC § 103(a) as being unpatentable over the patent to Rhoads (6,026,193) in view of the patent to Eraslan (6,381,346).

The Applicant respectfully traverses the rejection for at least the following reasons. Independent claims 1 and 6 have been amended herein to recite, among other things:

Claim 1:

the circuit being disposed on a silicon die and comprising two or more devices formed on the silicon die, said polling being performed at power-up for a digital fingerprint, the digital fingerprint being based at least in part on an electrical characteristic of the two or more devices of the circuit due to a process by which the silicon die was manufactured

Claim 6:

the digital fingerprint circuit being disposed on a silicon die and comprising the plurality of devices formed on the silicon die, the digital fingerprint being based at least in part on an electrical characteristic of the plurality of devices of the circuit due to a process by which the silicon die was manufactured

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Nowhere do the patents to Eraslan, Rhoads, or Ng teach that a digital fingerprint is based at least in part on an electrical characteristic of the two or more devices of the circuit due to a process by which the silicon die was manufactured, as recited in claims 1 and 6 as amended herein, and their respective dependent claims. Therefore, since Eraslan, Rhoads, and Ng do not teach or disclose all of the elements as recited in claims 1 and 6 as amended herein, Eraslan, Rhoads, and Ng do not render obvious claims 1-4, 5-10, or 18-20. It is therefore believed that the rejection should be withdrawn.

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CONCLUSION

In view of above, the Applicant submits that this application is in condition for

allowance. Therefore consideration of this Response and allowance of the application are

respectfully solicited.

If the Examiner believes that there are any unresolved issues in the application, it is

requested that the Examiner telephone the undersigned at (425) 882-6603 to expeditiously

resolve such issues.

Respectfully submitted,

Date: 01/15/2008

/Kevin D. Wills/

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